



## Course syllabus

Faculty of Technology

Department of Building Technology

4BY065 Trä i byggsystem, 7,5 högskolepoäng

4BY065 Timber Based Building Systems, 7.5 credits

### **Main field of study**

Civil Engineering

### **Subject Group**

Building Technology

### **Level of classification**

Second Level

### **Progression**

A1N

### **Date of Ratification**

Approved by Faculty of Technology 2014-10-02

The course syllabus is valid from autumn semester 2015

### **Prerequisites**

General entry requirements and English B (Field-specific entry requirements 2/A2). At least 7,5 credits Structural Mechanics or Solid Mechanics and 15 credits Mathematics.

## Objectives

After this course students should:

- have a understanding for the basis of structural engineering and load combinations
- have a understanding for the behaviour of structures in timber and engineered wood products
- have the ability to design advanced timber structures including, stabilisation, complex glulam beams, connections and vibrations
- be able to design and analyse advanced timber structures

## Content

The course includes:

- the background to the design standards and load combinations
- basic understanding of wood as a structural material; grading, influence of service class and load duration

- design of timber structures subjected to tension, compression or bending
- design of curved beams and beams with varying depth
- stabilisation of timber structures
- timber connections - understanding of the behaviour and design
- springiness and vibrations

## Type of Instruction

The teaching consists of lectures, exercises, laboratory work, project work and study visits. Some elements are compulsory.

The extent of the compulsory elements is announced by the examiner at the start of the course

## Examination

The course is assessed with the grades A, B, C, D, E, Fx or F.

The grade A constitutes the highest grade on the scale and the remaining grades follow in descending order where the grade E is the lowest grade on the scale that will result in a pass. The grade F means that the student's performance is assessed as fail (i.e. received the grade F).

The assessment of student performances usually takes place during special examination periods and may be written and/or oral. The assessment may also be based on submitted reports of laboratory work and exercises.

## Course Evaluation

When the course has finished, an evaluation is compiled. The results are reported to the students and then archived according to the rules of the school.

## Credit Overlap

The course cannot be included in a degree along with the following course/courses of which the content fully, or partly, corresponds to the content of this course: 4BY064 Timber Based Building Systems, 7,5 credits.

## Other

The course will be given in English if there are international students.

Grade criteria for the A–F scale are communicated to the student through a special document. The student is to be informed about the grade criteria for the course by the start of the course at the latest.

## Required Reading and Additional Study Material

### Required reading

Bergkvist, Per (red.) (2011). Design of timber structures. Stockholm: Swedish Forest Industries Federation

Johansson, Marie (2012) Exercises in timber structures, Linneaus University